AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (original) A method for integrating a wireless terminal into a wireless network, comprising:

determining whether the wireless terminal contains at least one functioning cluster transceiver;

attempting to affiliate the wireless terminal with a cluster head as a cluster member if the wireless terminal contains said at least one functioning cluster transceiver; and

operating the wireless terminal as a cluster head if the wireless terminal does not contain said at least one functioning cluster transceiver.

2.   (original) The method of claim 1, further comprising:

operating the wireless terminal as a cluster member by communicating with an affiliated cluster head if the attempted affiliation is successful.

3.   (original) The method of claim 1, further comprising:

determining whether the wireless terminal contains one or more functioning backbone transceivers if the attempted affiliation is not successful; and

operating the wireless terminal as a cluster head if the wireless terminal contains one or more functioning backbone transceivers.

4.   (original) The method of claim 3, further comprising:

repeating said attempting to affiliate if the wireless terminal does not contain one or more

functioning backbone transceivers.

5.   (original) The method of claim 1, wherein said attempting to affiliate includes:

receiving beacon messages from different cluster heads,

ignoring cluster heads with a signal strength less than a threshold,

returning an unsuccessful affiliation result if all cluster heads are ignored in said

ignoring, and

ordering any cluster heads not ignored in said ignoring into a list according to a

predetermined criterion.

6.   (original) The method of claim 5, wherein said attempting to affiliate further

includes:

sending an affiliation request to a cluster head at a top of the list,

sending an affiliation confirmation to the cluster head at the top of the list if a response to

the affiliation request is received, and

deleting the cluster head at the top of the list if no response to the affiliation request is

received.

7.   (original) The method of claim 2, wherein said operating the wireless terminal as

a cluster member includes:

periodically executing an affiliation check, and

repeating said determining after a delay period if the affiliation check is unsuccessful.

8.   (original) The method of claim 7, wherein said executing an affiliation check includes:

storing a number of beacon messages from the affiliated cluster head,

ascertaining whether a set fraction of the beacon messages has a signal strength above a threshold value, and

continuing to operate as a cluster member if a set fraction of the beacon messages has a signal strength above the threshold value.

9.   (original) The method of claim 1, further comprising:

delaying for a random period before said determining.

10.   (previously presented) A method for configuring a wireless terminal within a wireless network, comprising:

operating the wireless terminal as a cluster head;

determining whether the wireless terminal contains at least one functioning cluster radio;

repeating said operating if the wireless terminal contains no functioning cluster radio;

ascertaining whether continued operation of the wireless terminal as a cluster head is necessary if the wireless terminal contains one or more functioning cluster radios; and

attempting to resign as the cluster head if the continued operation of the wireless terminal as a cluster head is not necessary.

11.   (original) The method of claim 10, further comprising:

repeating said operating if the continued operation of the wireless terminal as a cluster head is necessary.

12.   (original) The method of claim 10, wherein the continued operation of the

wireless terminal as a cluster head is not necessary when the wireless terminal becomes too close

to one or more other cluster heads.

13.   (original) The method of claim 10, wherein said attempting to resign includes:

broadcasting a resignation request to other cluster heads and cluster members associated

with the cluster head,

receiving confirmation messages from the other cluster heads and cluster members

associated with the cluster head,

determining whether confirmation messages have been received from all of the other

cluster heads and cluster members to which the resignation request was broadcast.

14.   (original) The method of claim 13, wherein said attempting to resign further

includes:

waiting for a fixed period of time between said broadcasting and said determining.

15.   (original) The method of claim 13, wherein said attempting to resign further

includes:

repeating said operating if confirmation messages are not received from all of the other

cluster heads and cluster members, and

determining whether the wireless terminal contains one or more functioning cluster

transceivers if confirmation messages are received from all of the other cluster heads and cluster

members.

16.   (previously presented) The method of claim 15, further comprising:

delaying for a random period before said determining whether the wireless terminal

contains at least one functioning cluster transceiver.

17.   (previously presented) A wireless network, comprising:

a plurality of first wireless terminals configured to operate as cluster heads by

communicating with at least one other cluster head over one or more backbone links, each one of

the plurality of first wireless terminals including one or more backbone transceivers, and

at least one second wireless terminal configured to operate as a cluster member by

communicating with an associated cluster head over one or more local links, each one of the at

least one second wireless terminals including one or more cluster transceivers,

wherein at least one of the first or second wireless terminals includes both a backbone

transceiver and a cluster transceiver.

18.   (original) The wireless network of claim 17, wherein the backbone transceiver is

configured to operate over first distances and in a first frequency range, and

wherein the cluster transceiver is configured to operate over second distances that are

shorter than the first distances and in a second frequency range that is different from the first

frequency range.

19.   (original) The wireless network of claim 18, wherein the backbone transceiver

includes a first radio operating in an ultrahigh frequency (UHF) range, and

wherein the cluster transceiver includes a second radio operating at substantially 2.4

GHz.

20.   (original) The wireless network of claim 17, wherein at least one of the first

wireless terminals includes two different types of backbone transceivers.

21.   (original) The wireless network of claim 17, wherein at least one of the first

wireless terminals includes two different types of cluster transceivers.

22.   (original) The wireless network of claim 17, wherein at least one of the at least

one second wireless terminals includes two different types of cluster transceivers.

23.   (original) The wireless network of claim 17, wherein at least one of the first

wireless terminals includes a backbone transceiver and a cluster transceiver.

24.   (currently amended) The wireless network of claim 17, wherein the one or more

backbone transceivers includes one or more of the following: a radio operating in an ultrahigh

frequency (UHF) range, a laser transceiver, a microwave transceiver, [[and]] or a code division

multiple access (CDMA) radio.

25.   (currently amended) The wireless network of claim 17, wherein the one or more

cluster transceivers includes one or more of the following: an acoustic transceiver, an omni-

directional optical transceiver, a very high frequency (VHF) transceiver, a code division multiple

access (CDMA) radio, an ultra-wideband (UWB) radio, [[and]] or a time-division multiple

access (TDMA) radio.

26.   (canceled)

27.   (previously presented) A wireless terminal, comprising:

means for determining whether the wireless terminal includes at least one cluster radio;

means for determining whether the wireless terminal includes at least one backbone radio

when the wireless terminal includes at least one cluster radio;

means for operating as a cluster head when the wireless terminal includes at least one

cluster radio and at least one backbone radio; and

means for operating as a cluster member when the wireless terminal includes at least one

cluster radio but no backbone radio.

28.   (previously presented) The wireless terminal of claim 27, further comprising:

means for operating as a cluster head when the wireless terminal includes no cluster

radio.

29.   (new) A method performed by a first terminal, the first terminal being a wireless,

mobile terminal, the method comprising:

receiving beacons from a plurality of second terminals, where at least one of the beacons

is received according to a first wireless access protocol and at least one other one of the beacons

is received according to a second wireless access protocol;

determining a signal strength associated with each of the second terminals based on the

beacons received according to the first and second wireless access protocols;

sending an affiliation message to one of the second terminals based on the determined

signal strength;

determining whether a response to the affiliation message is received from the one of the

second terminals; and

affiliating with the one of the second terminals when the response to the affiliation

message is received from the one of the second terminals.

30.   (new) The method of claim 29, further comprising:

periodically repeating the receiving beacons, determining a signal strength, sending an

affiliation message, determining whether a response to the affiliation message is received, and

affiliating with the one of the second terminals as the first terminal moves to different locations.